Charlotte-Mecklenburg STORM WATER Services

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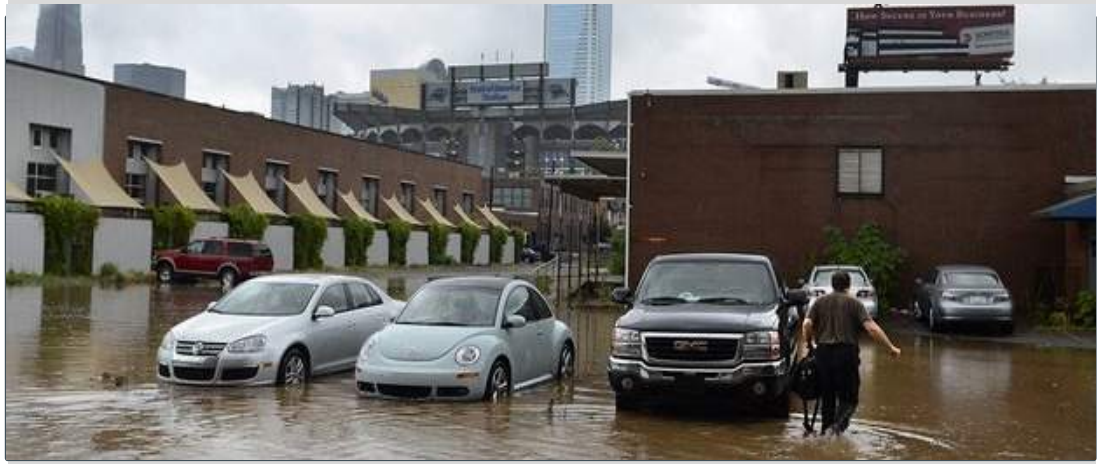

Hill Street

Storm Drainage Improvement Project

Public Information Meeting

Roof with a View
800 West Hill Street
Suite 104
Charlotte, NC 28208

May 12, 2015
6:00pm-8:00pm

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6135 Lakeview Rd. Suite 150
Charlotte, NC 28269

Staff Introductions

Matthew Gustis, PE
City Engineering Team Program Manager

Doug Lozner, PE
City Watershed Area Manager

Steven McCraney
City Project Coordinator

Danee McGee, PE, CFM
City Project Manager
704-336-4103
dmcgee@ci.charlotte.nc.us
www.charmeck.org

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Planning & Design Consultant

Christopher Fleck, PE
Project Manager

Crystal Williams, PE, CFM
Project Engineer

Jonathan Drazenovich
Project Engineer

AGENDA

- Sign In
- Charlotte Mecklenburg Storm Water Services Summary
- Project Selection & Citizen Involvement
- Existing Conditions Analysis Overview
- Selected Alternative
- Future Project Milestones
  - Geo-Environmental
  - Design
  - Permitting
  - Real Estate
  - Construction

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Charlotte Mecklenburg Stormwater Services Summary

Items that qualify for service:

- Public water that causes another qualifying problem, such as roadway and\or structural flooding.

Items that DO NOT qualify for service:

- Private property issues. Such as parking lots, private pipes under buildings, downspouts, and private yard flooding.

What the program includes:

- Administration and Technology
- Water Quality
- Maintenance
- Engineering

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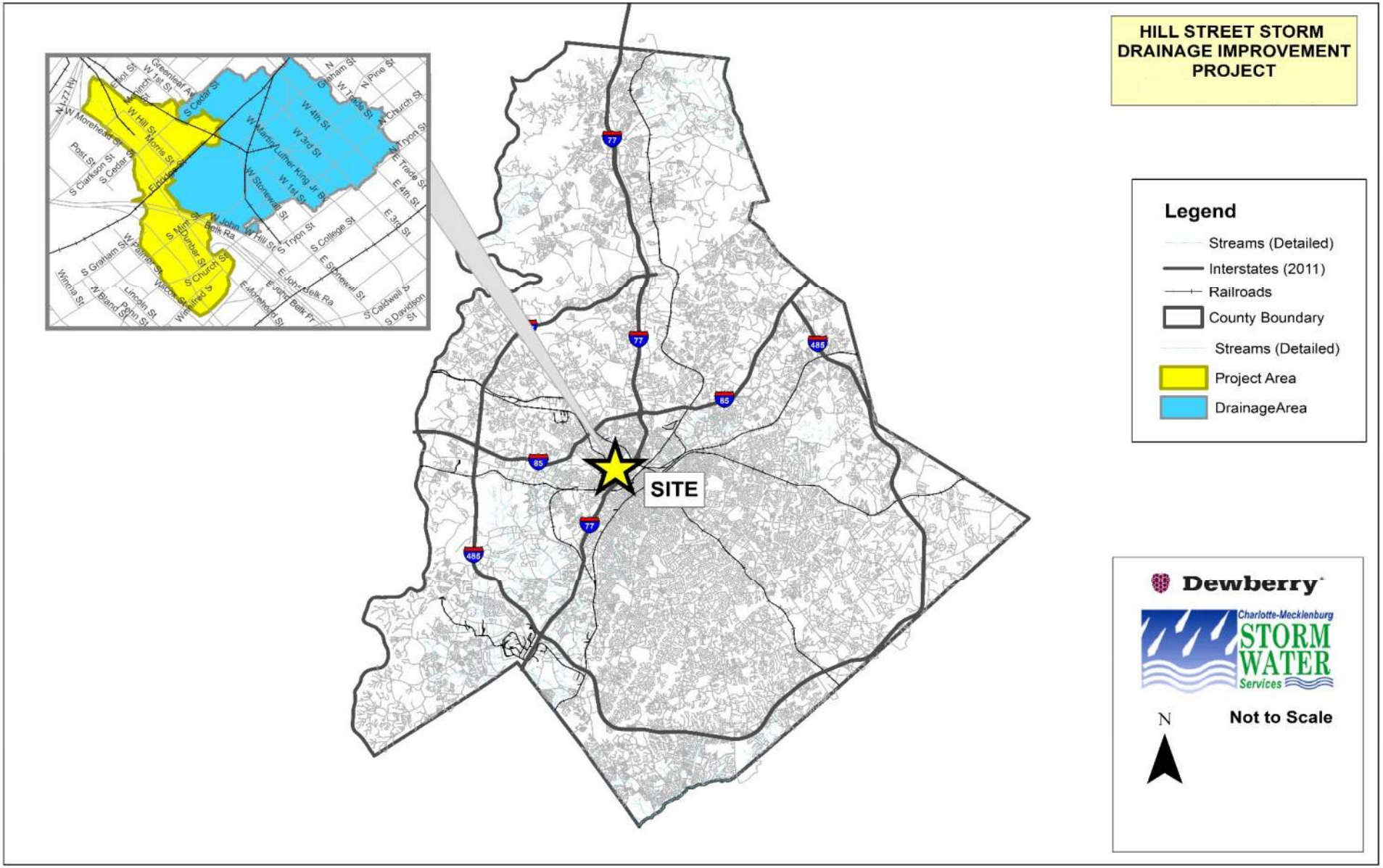
Site Location Map



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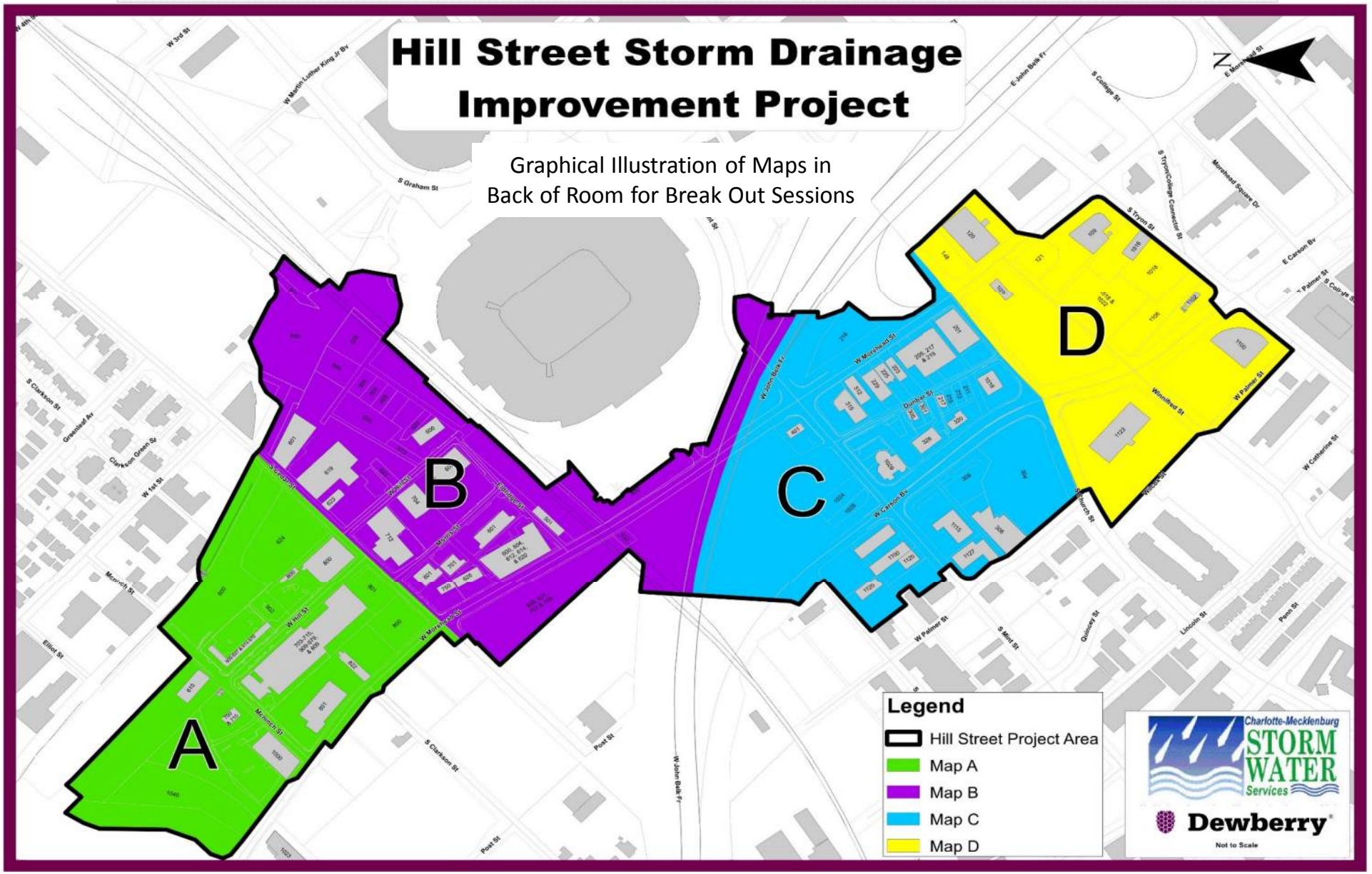
Overall Project Site Map



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Why Hill Street was selected?

- ✓ Citizen Input from Property Owners (311 Requests)
  - ✓Inadequate Existing Infrastructure
  - ✓Observed Existing Road Flooding
  - ✓Existing Structure Flooding
- ✓ Deteriorating Infrastructure
  - ✓Aging culverts, pipes, and inlets
- ✓ CMSWS watershed ranking
- ✓ Larger watershed-wide and city-wide drainage issues

What do we need from you?

- Support for the project's future phases.

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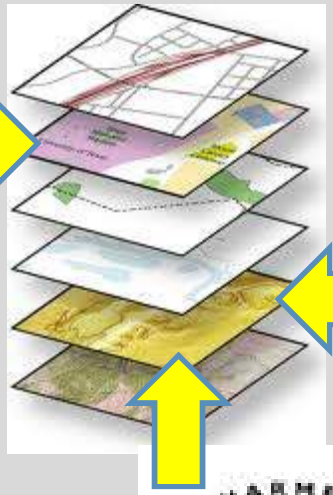
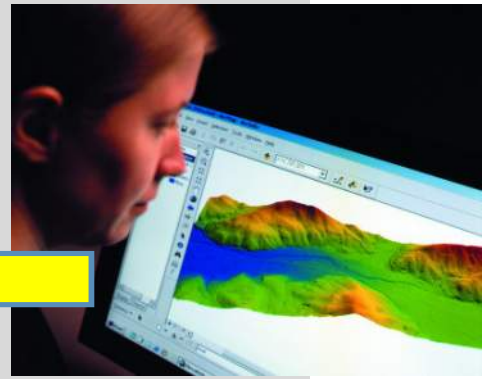
Integrating:

Field Data





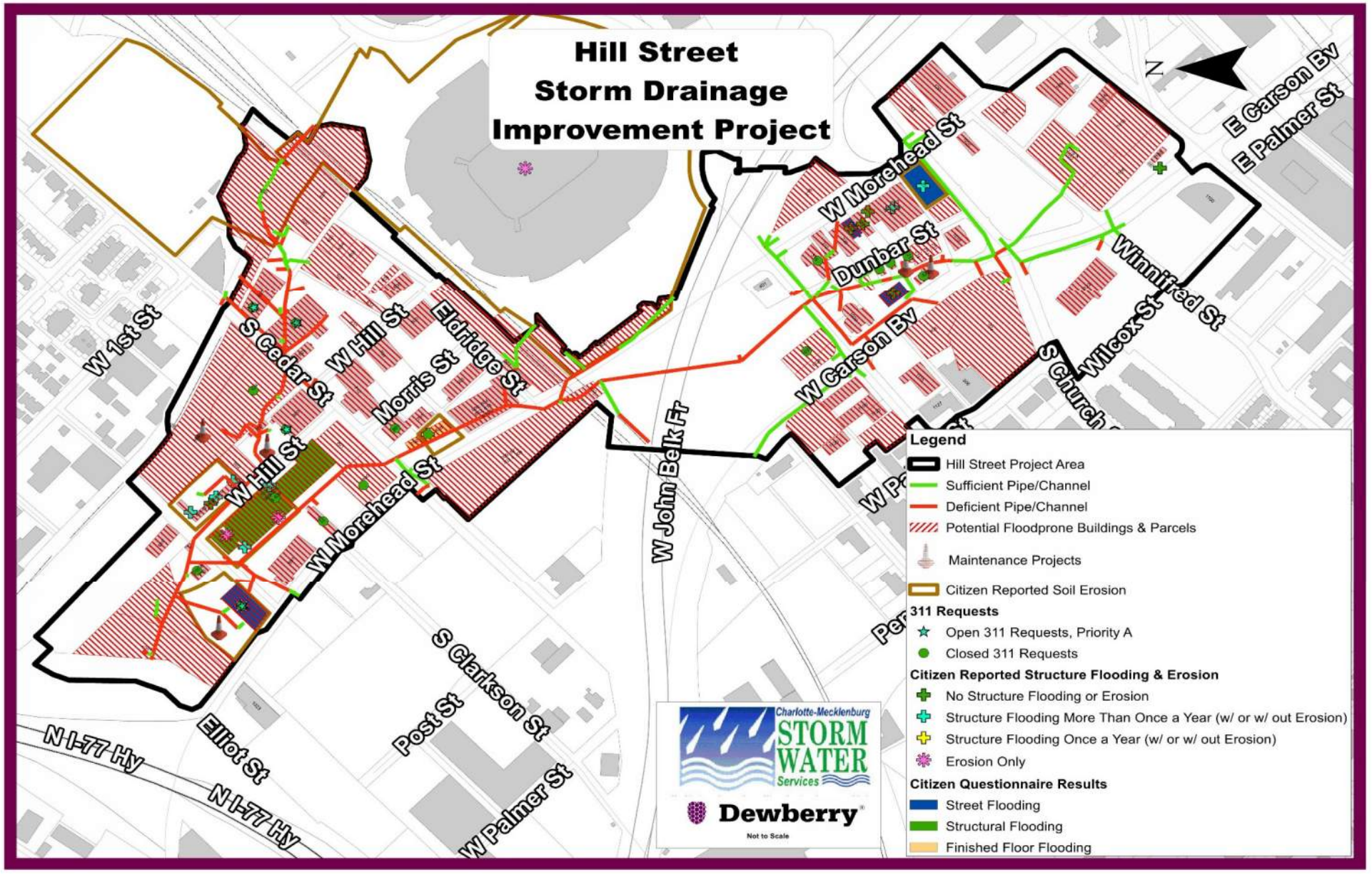
Technology

Citizen Input

Existing Conditions Analysis Overview

- Survey of Existing Information
  - Topographic Survey
  - System Inventory
- Existing Zoning, Land Use, Soils
- Engineering Evaluation of Existing System Performance
- Mapping and Reports of Engineering Results

Existing Conditions Overview Map



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Existing Conditions Analysis Results

-Based on nearly 50 different criteria for pipes, channels, inlets, etc., our consultants found that:

- 75% of storm drainage pipes in project area are deficient
- 40% of storm drainage channels in project area are deficient
- 100% of storm drainage culverts in project area are deficient
- 40% of storm drainage inlets in project area are deficient
- 70% of the buildings in the project area are potentially flood prone during the design storm.

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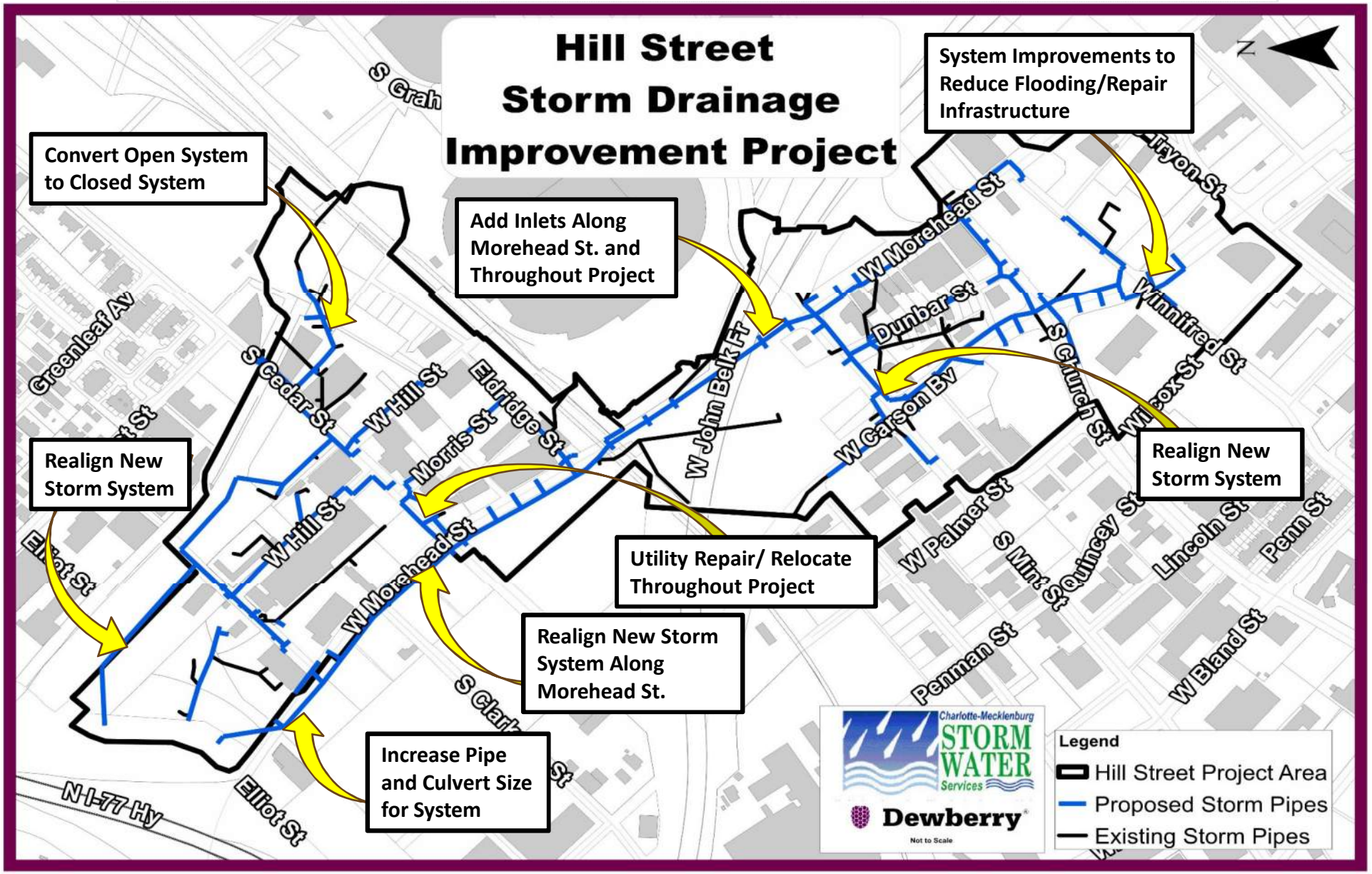
Selected Alternative Overview



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City Design Standards Results

-Based on nearly 20 different criteria for pipes, channels, inlets, etc., our consultants found the following improvements necessary:

- 4.1 miles of Proposed Storm System
- 459 Proposed Storm Drainage Structures
- Approximately 4000 LF of Utility Relocations

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Selected Alternative Results

Goals

- To provide a storm drainage system that is safe, clean, and cost effective.
- To determine the best possible solutions by:
  - Considering Public Safety, Health & Welfare
  - Maximizing Benefit vs. Cost
  - Working to Reduce Potential Flood Risks
  - Alleviating 100 Year Finished Floor Flooding

Based on nearly 20 different criteria for pipes, channels, inlets, etc., our consultants found the following improvements necessary:

- 4.5 miles of Proposed Storm System
- 486 Proposed Storm Drainage Structures
- Approximately 4500 LF of Utility Relocations

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City Design vs. Selected Alternative

Analysis	Pros	Cons
City Design	- Maintains more of existing alignments where possible - Alleviates building flooding from design storm event	- Requires costly boring under HWY-277 - Significant foundation protection required - Significant Impacts to private property due to alignments and easements - Larger culverts due to single system design - Constructability - Cost
Selected Alternative	- Smaller culverts than the City Design system due to a parallel system - Pipe alignments utilize existing right of way - Reduces impact to private property - Eliminates costly boring under HWY-277 - Alleviates building flooding from design storm event	- Significant foundation protection required - Cost

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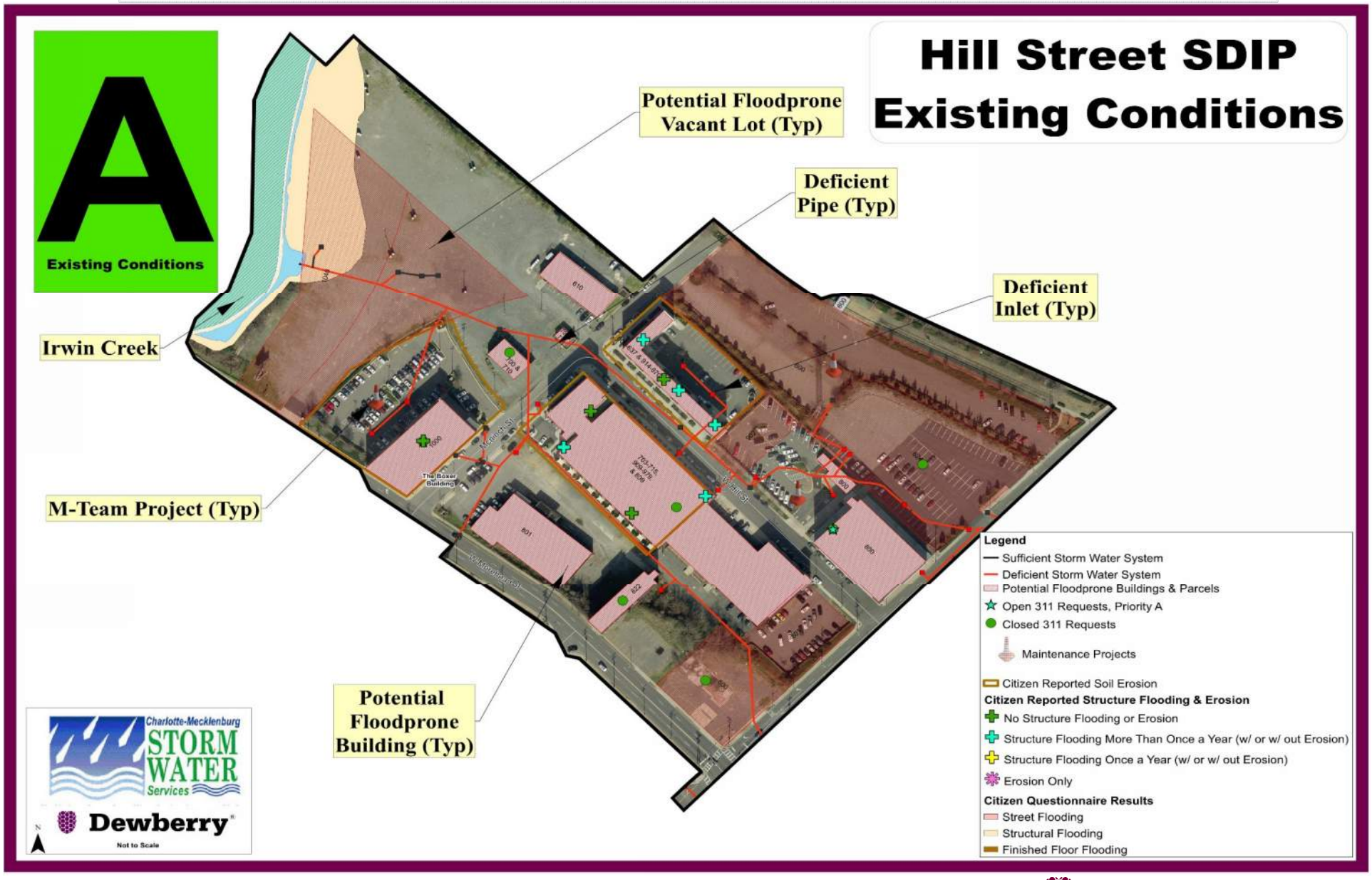
Existing Conditions Map A



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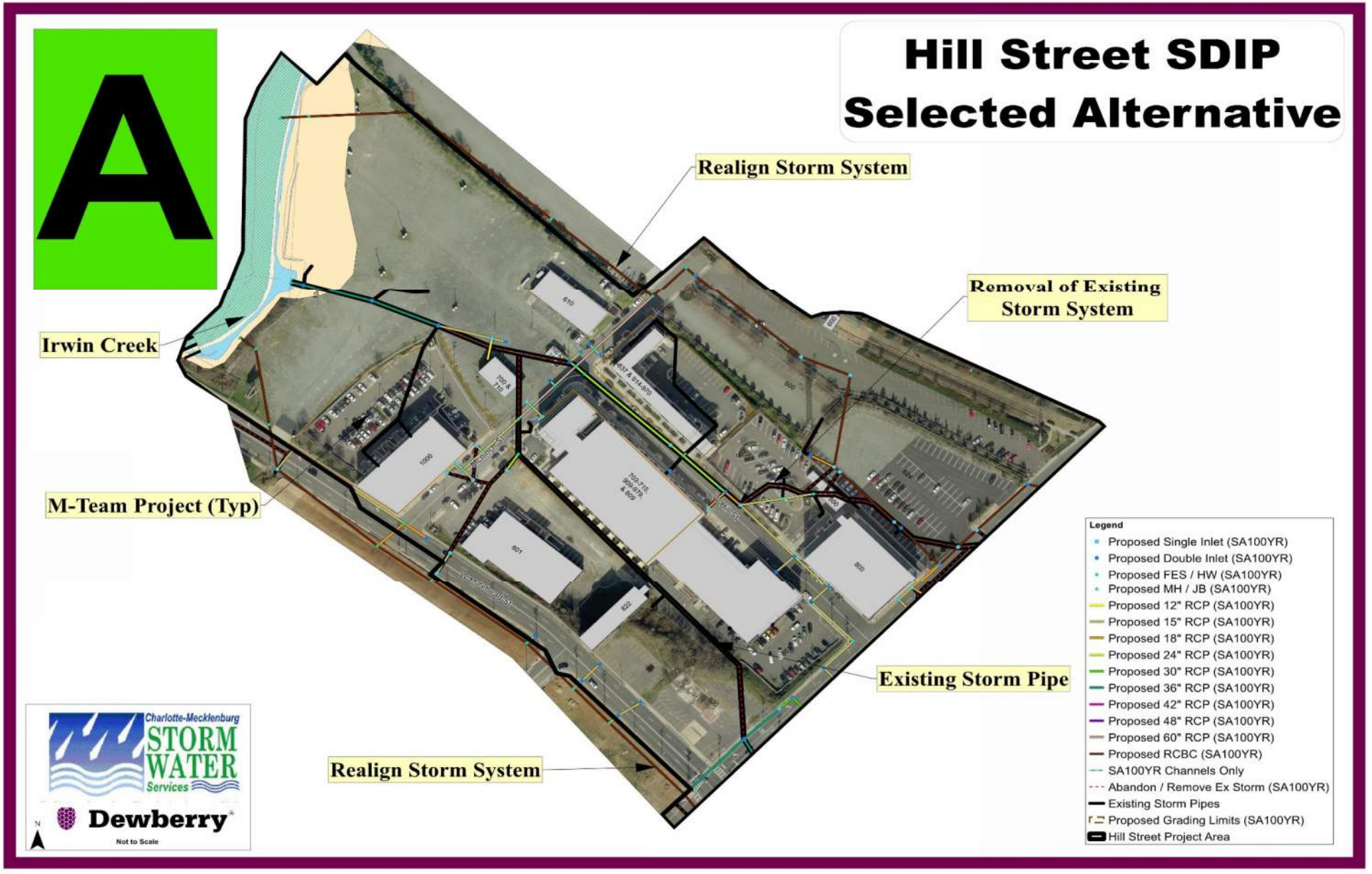
Selected Alternative Map A



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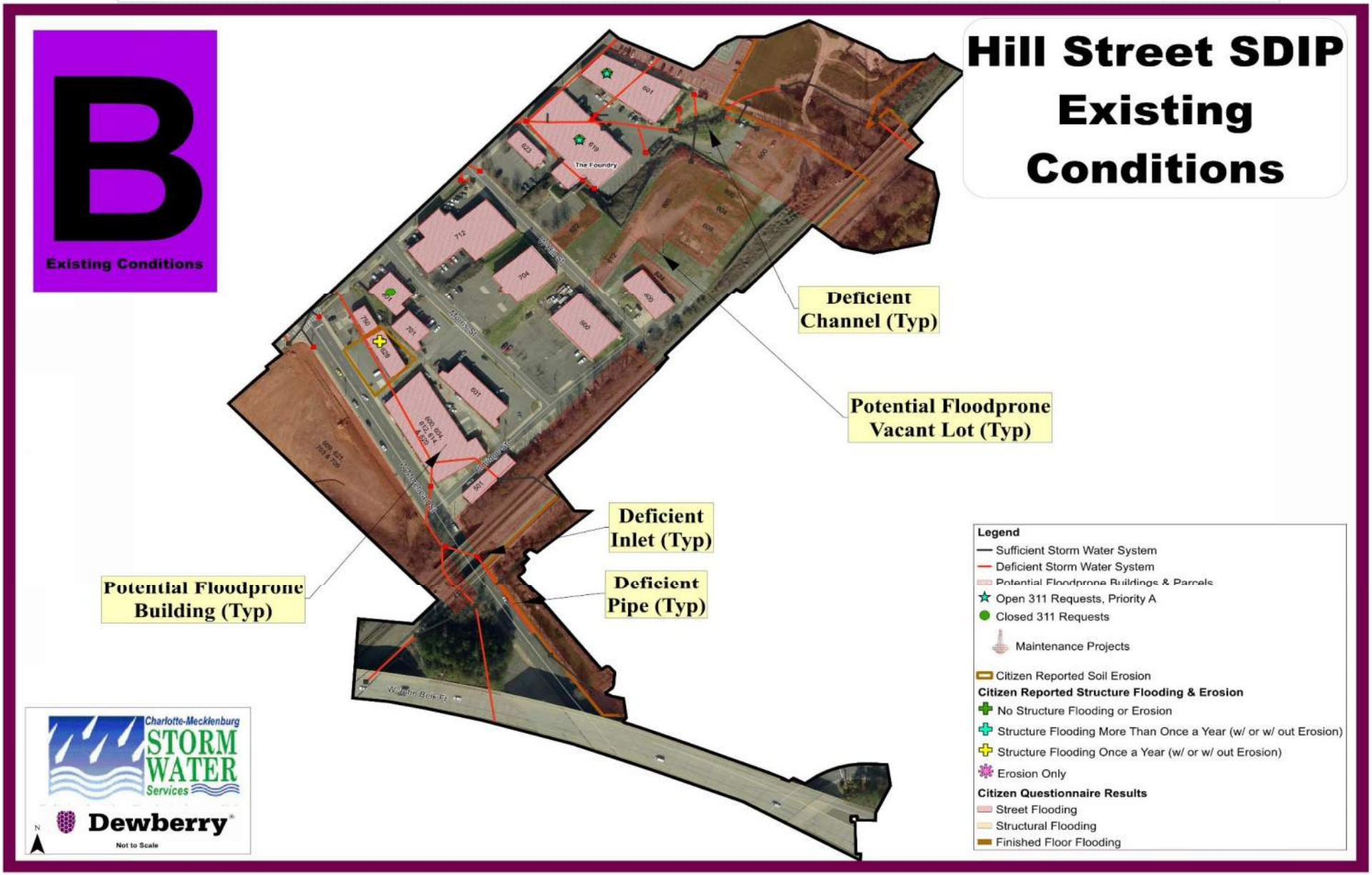
Existing Conditions Map B



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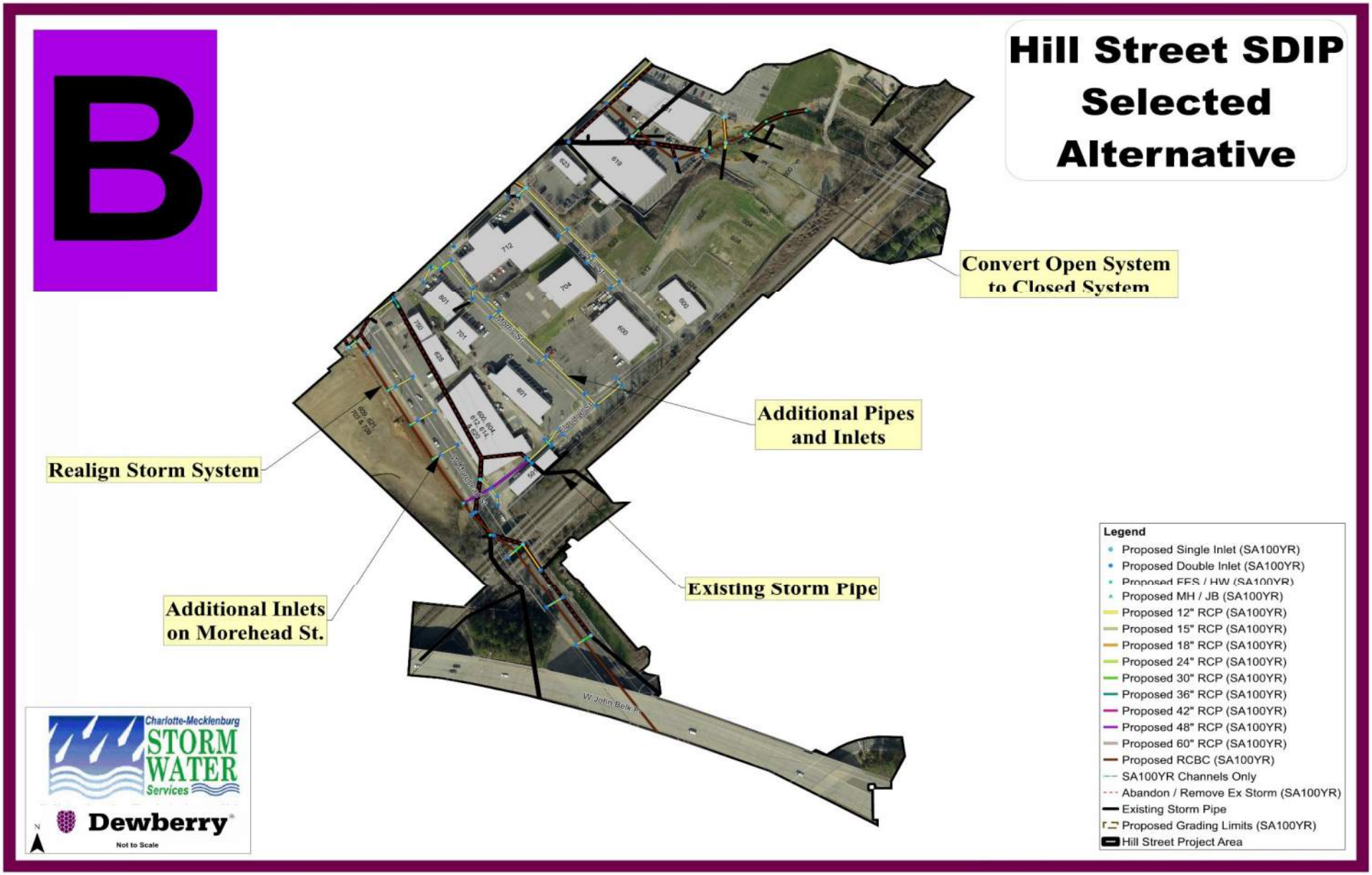
Selected Alternative Map B



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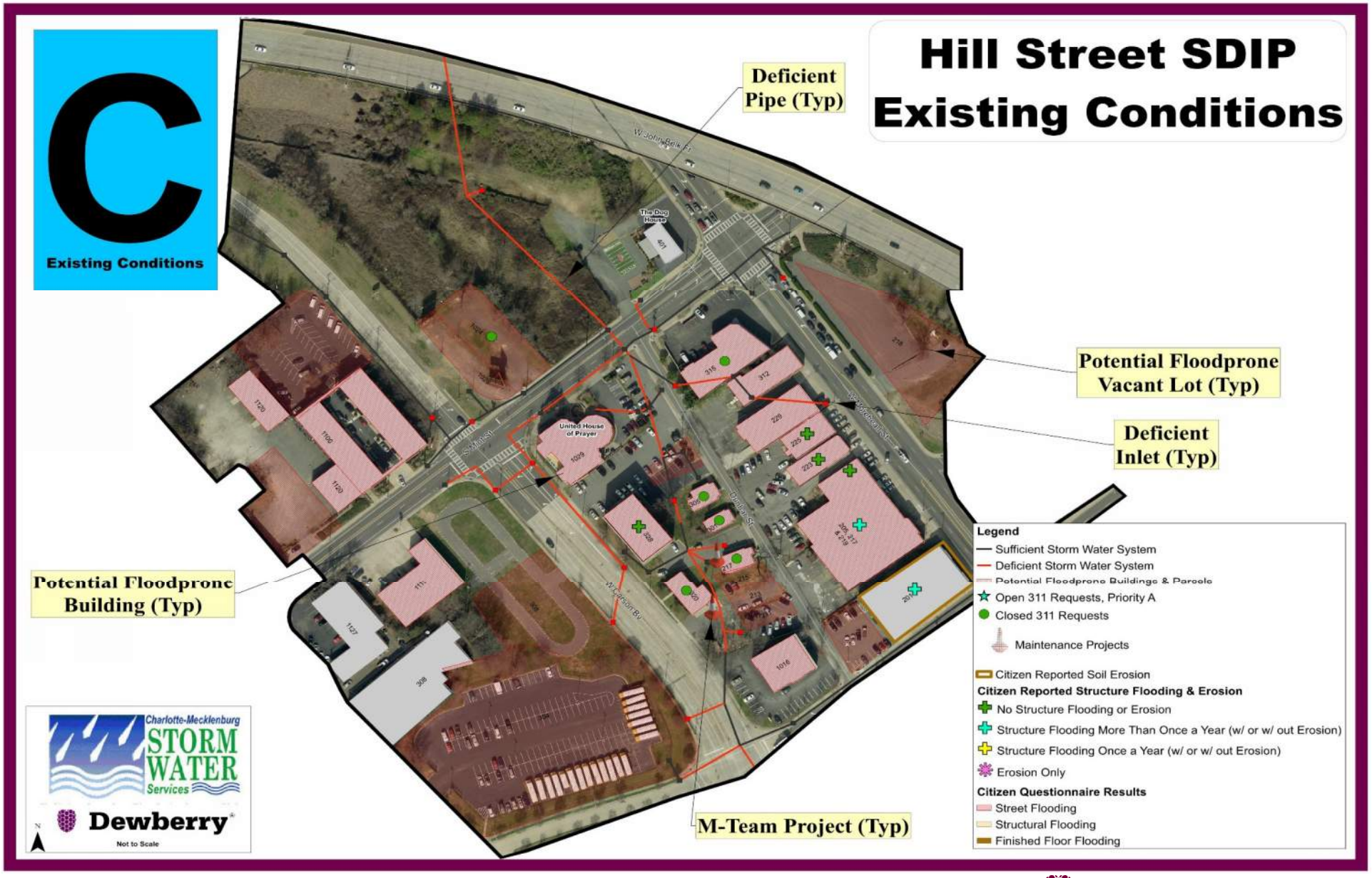
Existing Conditions Map C



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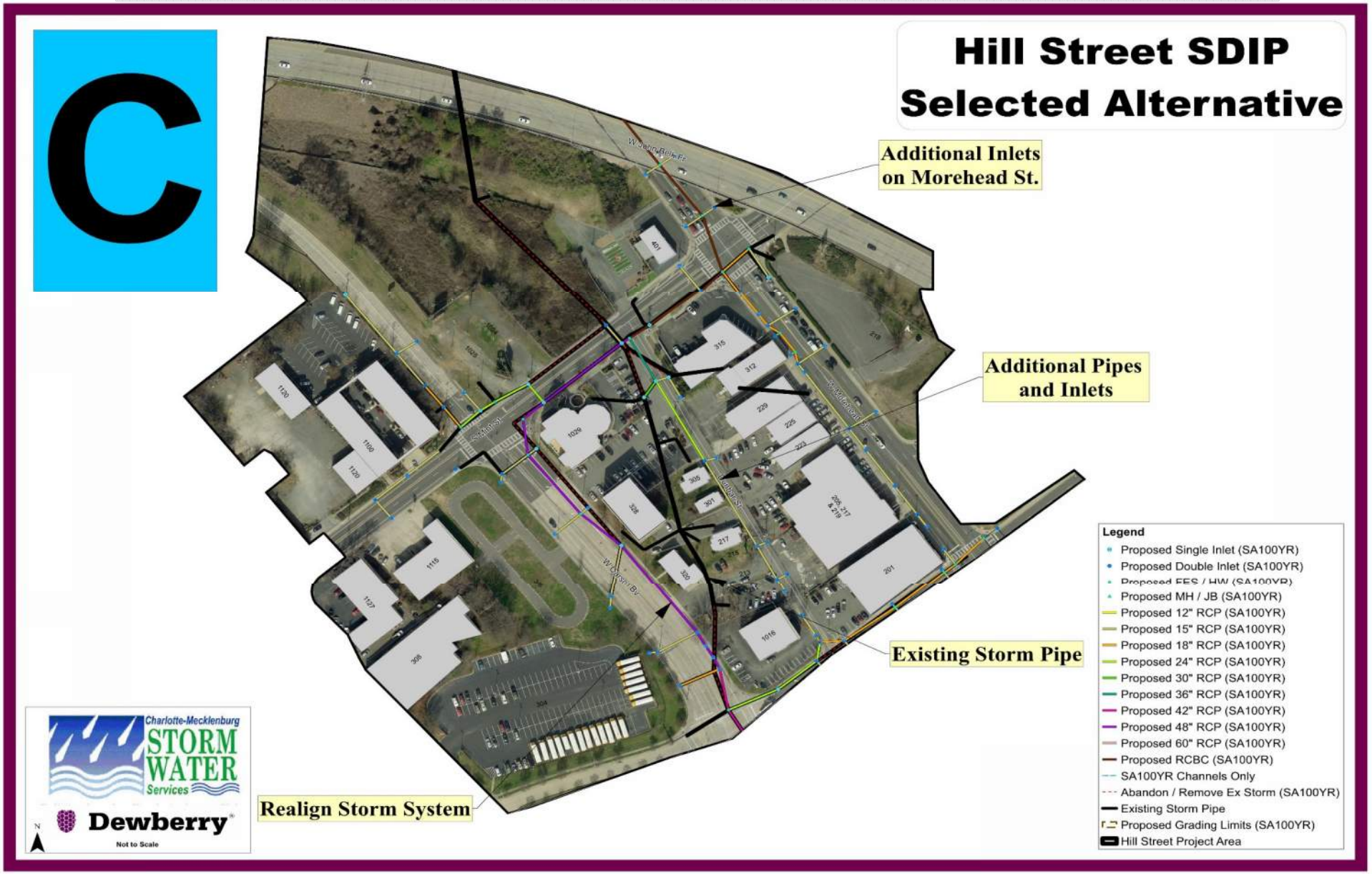
Selected Alternative Map C



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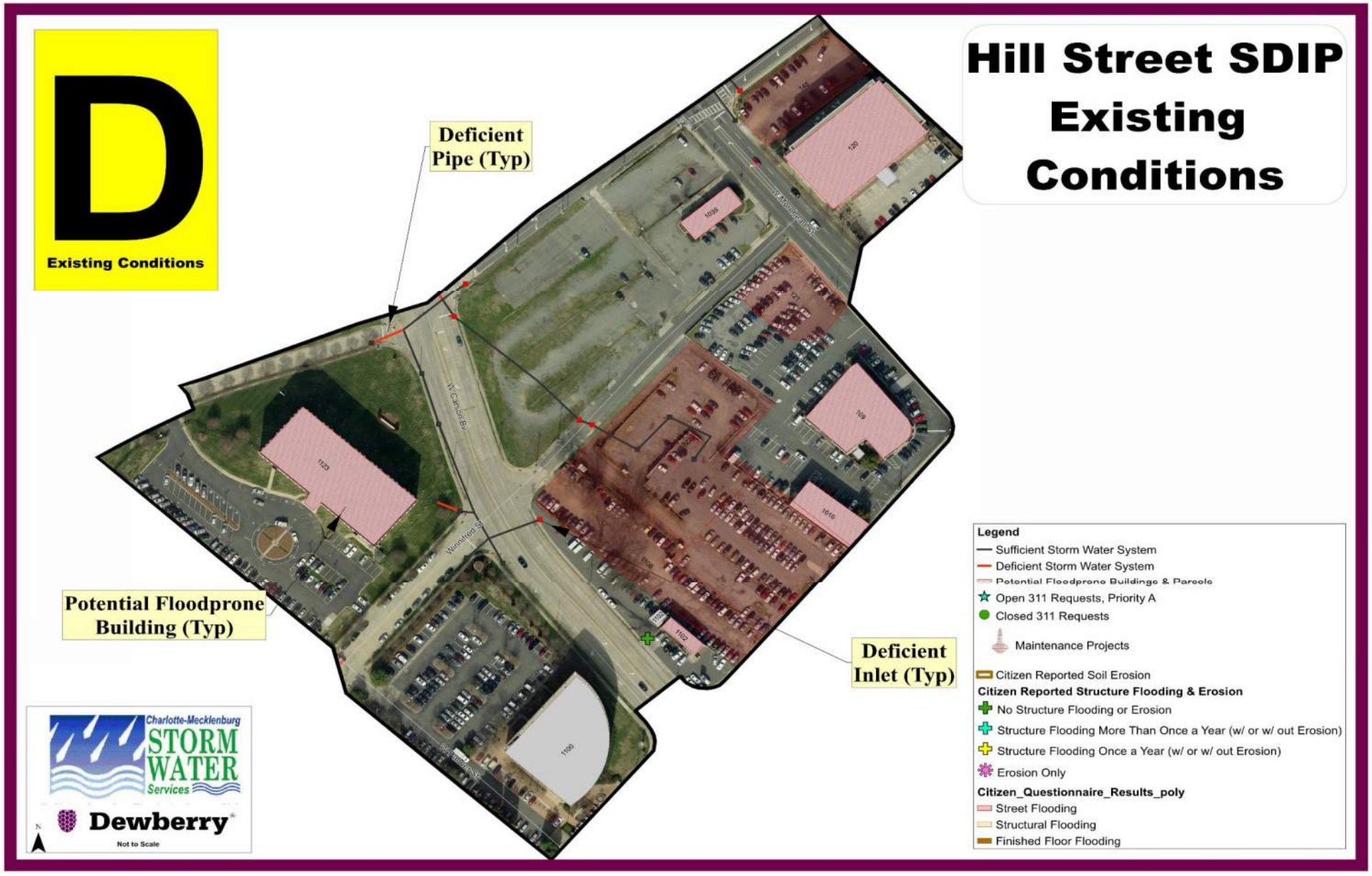
Existing Conditions Map D



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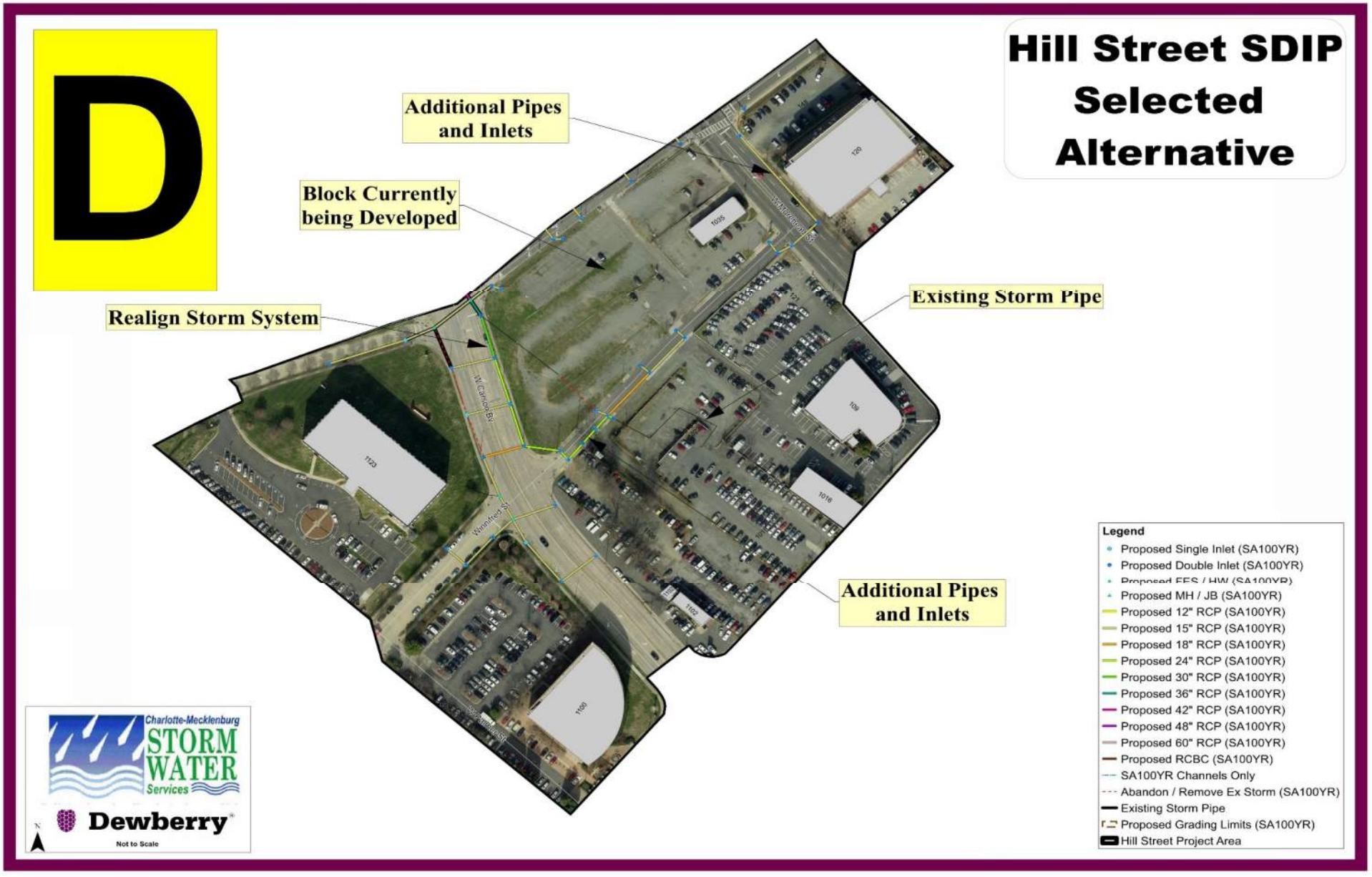
Selected Alternative Map D



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Planning- (*Completed*)

- Preliminary Survey (completed)
- Existing Conditions (completed)
- City Design Standard Analysis (completed)
- Alternative Analysis (completed)
- Selected Alternative Analysis (completed)

Design and Construction may be phased due to cost, size, and complexity of watershed.

Note: Downstream system to be constructed first

Geo-Environmental/Design Survey (In Progress)

Design- Estimated 1 year duration

Real Estate\Easement Phase & Permitting- Estimated 1 year duration

Bid- Estimated 9 months duration

Construction- Estimated 1-2 year duration per phase (TBD)

Future Project Milestones

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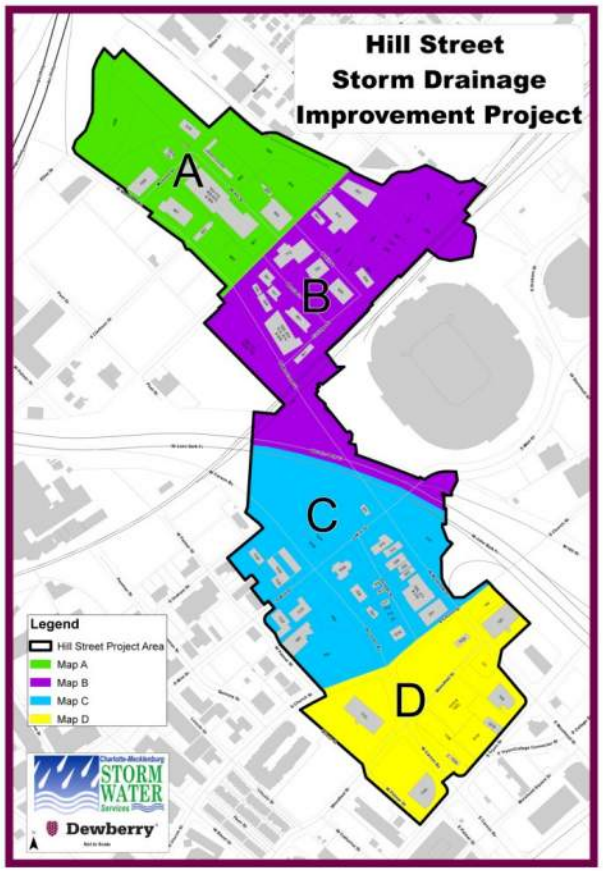
Conclusion

- Please remember to sign in and fill out a customer service card **if you have not filled one one out previously.** Be sure to include if you are the owner or a tenant of the property.

- At the end of the presentation, please find the map where your property is located for details. Also feel free to speak to a representative to **let us know of any additional flooding you have observed.**

- General Discussion

- Thank you for coming to the meeting, and have a nice evening!



For more information please visit the Charlotte Mecklenburg Storm Water Services website at: http://charmeck.org/stormwater/Projects

Charlotte-Mecklenburg STORM WATER Services

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Public Meeting Agenda
Hill Street Storm
Drainage Improvement Project
City Project #: 671-11-003
May 12, 2015
6:00 PM

- **Sign In**
- **Charlotte Mecklenburg Storm Water Services Summary**
- **Project Selection and Citizen Involvement**
- **Existing Conditions Analysis Overview**
- **Selected Alternative**
- **Future Project Milestones**
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  - **Design**
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Contact
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Public Meeting
Hill Street Storm
Drainage Improvement Project
City Project #: 671-11-003
May 12, 2015
6:00 PM

Sign In Sheet:

Name	Street Address	Telephone	Email Address